

Host Records for Some Species of Pompilidae From the Southwestern United States and Mexico

(Hymenoptera)

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The nesting behaviors and host records of many species of Pompilidae from the southwestern United States and Mexico remain virtually unknown. This paper attempts to fill in some of the host record gaps. In addition to presenting first host records for *Priocnemioides angusticeps*, *P. aratus*, and *Anoplius percitus*, new host species of spiders are listed for *Ageniella* (*Ageniella*) *conflicta* Banks, *A. (A.) partita* Banks, *A. (Priophanes) arcuata* (Banks), *Anoplius (Lophopompilus) aethiops* (Cresson), *A. (Notiochaes) lepidus atramentarius* (Dahlbom), *A. (Arachnophroctonus) relativus* (Fox), *A. (Anoplius) ithaca* (Banks), and *A. (A.) toluca* (Cameron). The host genus of *Dipogon (Deuteragenia) thoracicus* Townes and a host species of *Anoplius (Arachnophroctonus) americanus ambiguus* (Dahlbom) are verified.

All host records and associations are based upon specimens collected in Arizona, New Mexico, Texas, and Mexico by R. E. Acciavatti (REA), U. S. Forest Service, Albuquerque, N. M., R. C. Miller (RCM), Cornell University, Ithaca, N. Y. and V. D. Roth (VDR), The Southwestern Research Station, Portal, Arizona. H. E. Evans of Colorado State University, Fort Collins, Colo., determined *Priocnemioides aratus* and confirmed the identity of *Anoplius percitus*. The host spiders were identified by W. J. Gertsch, Portal, Arizona, V. D. Roth, and R. A. Norton, SUNY College of Environmental Science and Forestry, Syracuse, N. Y.

TRIBE PEPSINI

Priocnemioides angusticeps Townes.—Host: *Lycosa antelucana* Montgomery (Lycosidae), ad. ♀. TEXAS. Tarrant Co. Colleyville, June 7, 1972 (REA).

Priocnemioides aratus Townes.—Host: *Lycosa carolinensis* Walckenaer (Lycosidae), ad. ♀. MEXICO. Sonora. 30 mi. s.e. Agua Prieta on mesa nr. Cajon Bonito, August 24, 1972 (VDR). "Lycosa spider in burrow of spider."

Dipogon (Deuteragenia) thoracicus Townes.—Host: *Xysticus* sp. (Thomisidae), imm. ARIZ. Cochise Co. S.W.R.S. 5 mi. w. Portal. 5400', September 18, 1964 (VDR).

TRIBE AUPLOPODINI

Ageniella (*Ageniella*) *conflicta* Banks.—Hosts: (a) *Pardosa valens* Barnes (Lycosidae), ad. ♀, with all legs amputated at coxal-trochanter joints. ARIZ., Cochise County, S.W.R.S. 5 mi. w. Portal. 5400', June 11, 1973 (RCM). (b) *P. valens* Barnes (Lycosidae), imm., with 3rd, 4th legs on both sides amputated. *Collection data*: Same as above. (c) *Trochosa gosiuta* Chamberlain (Lycosidae), imm., with all legs amputated at coxal-trochanter joints. *Collection data*: Same as above except June 14, 1973.

Ageniella (*Ageniella*) *partita* Banks.—Host: *Pardosa falcifera* F. Cambridge (Lycosidae), imm. ♂ with ? legs amputated. *Collection data*: Same as above except May 27, 1964 (VDR).

Ageniella (*Priophanes*) *arcuata* (Banks).—Host: *Sassacus papenhoei* Peckham (Salticidae), ad. ♀, with all legs amputated at coxal-trochanter joints. ARIZ. Cochise Co. Portal, July 31, 1973 (RCM).

TRIBE POMPILINI

Anoplius (*Lophopompilus*) *aethiops* (Cresson).—Hosts: (a) *Lycosa santrita* Chamberlain & Ivie (Lycosidae). ARIZ. Cochise Co. S.W.R.S. 5 mi. w. Portal. 5400', October 14, 1965 (VDR). (b) *Lycosa carolinensis* Walckenaer (Lycosidae), ad. ♂. N. MEX. Catron Co. 0.7 mi. w. Quemado at Largo Creek. 6900', October 2, 1973 (REA).

Anoplius (*Notiochares*) *lepidus atramentarius* (Dahlbom).—Host: *Lycosa antelucana* Montgomery (Lycosidae), imm. ♀. TEXAS. Tarrant Co. Colleyville, June 7, 1972 (REA).

Anoplius (*Arachnoproctonus*) *americanus ambiguus* (Dahlbom).—Host: *Arctosa littoralis* (Hentz) (Lycosidae), imm. ♀. N. MEX. Sandoval Co. 1 mi. s. San Ysidro at Rio Salado. 5500', August 18, 1973 (REA).

Anoplius (*Arachnoproctonus*) *relativus* (Fox).—Host: *Arctosa littoralis* (Hentz) (Lycosidae), ad. ♀. (2 records). TEXAS. Cooke Co. 0.7 mi. e. Rosston at Clear Creek, October 10, 1973 (REA).

Anoplius (*Pompilinus*) *percitus* Evans.—Host: *Trochosa* sp., prob. *gosiuta* Chamberlain (Lycosidae), imm. N. MEX. Bernalillo Co. Albuquerque, 2 mi. n.e. Univ. of Albuquerque. 4980', June 24, 1973 (REA).

Anoplius (*Anoplius*) *ithaca* (Banks).—Host: *Pardosa steva* Lowrie and Gertsch (Lycosidae), ad. ♀. N. MEX., Grant Co. 0.5 mi. w. Lake Roberts along Hwy. 35 6000', July 11, 1972 (REA).

Anoplius (*Anoplius*) *toluca* (Cameron).—Hosts: (a) *Schizocosa avida* group (Lycosidae), ad. ♀. N. MEX., Hidalgo Co. 20 mi. n. Rodeo, June 13, 1973 (RCM). (b) *Trochosa gosiuta* Chamberlain (Lycosidae), ad. ♀. ARIZ., Cochise Co. S.W.R.S. 5 mi. w. Portal. 5400', September 17, 1965 (VDR).

DISCUSSION

In the present paper, *Priocnemioides angusticeps* and *P. aratus* are recorded with prey for the first time. These records bring to five the number of Nearctic species and subspecies of *Priocnemioides* for which host records are now available, and they substantiate the fact that species of this pompilid genus, regardless of size, prefer wolf-spiders belonging

to the genus *Lycosa*. The observation of *P. aratus* attacking *L. carolinensis* in its burrow and then leaving the spider there suggests that some species of *Priocnemioides* may utilize the spider's burrow as a nest. On the other hand, Janvier (1930) and Evans and Yoshimoto (1962) pointed out that other species of *Priocnemioides* do, in fact, construct their own burrow and transport the spider backwards on the ground to the nest.

The record of *Dipogon (Deuteragenia) thoracicus* preying on *Xysticus* sp. (Thomisidae) substantiates Evans' (1974) prey record for this species and, in addition, underlines the fact that species in this genus often utilize small thomisids and salticids as prey (see Medler and Koerber, 1957; Evans and Yoshimoto, 1962; Fye, 1965; Krombein, 1967; Kurczewski and Kurczewski, 1972).

Ageniella (Ageniella) conflicta has been reported to prey upon small lycosids of the genera *Arctosa*, *Lycosa*, and *Trochosa* (Hurd and Wasbauer, 1956; Townes, 1957; Evans and Yoshimoto, 1962; Kurczewski and Kurczewski, 1968a). The records of small, adult and immature *Pardosa valens* and immature *Trochosa gosiuta* for *A. conflicta* which are presented herein substantiate this preference.

Ageniella (Ageniella) partita has been recorded with prey several times and these hosts comprise wandering spiders belonging to the families Gnaphosidae and Lycosidae (summary in Kurczewski and Kurczewski, 1968b). The record included herein of *A. partita* preying upon *Pardosa falcifera* (Lycosidae) does not alter this host preference.

That of *Ageniella (Priophanes) arcuata* preying upon the salticid *Sassacus papenhoei* introduces a new host family for this pompilid species. Previously, *A. arcuata* had been reported to provision with Oxyopidae and Thomisidae (Evans and Yoshimoto, 1962; Evans, 1964). Although the first three host records for this pompilid have revealed three host families of spiders, *A. arcuata* is nevertheless selecting spiders with rather similar ecologies.

The records presented herein for *Anoplius (Lophopompilus) aethiops* bring to light two new host species which merely accentuate its preference for rather large wolf-spiders of the genus *Lycosa* (summary in Kurczewski and Kurczewski, 1973). The fact that one of these records is a male spider is noteworthy in view of the fact that the vast majority of records for this species of pompilid are for female spiders. Likewise, the record of *Anoplius (Notiochares) lepidus atramentarius* utilizing *Lycosa antelucana*, a new host species, for provisions underlines its preference for rather large wolf-spiders (see Evans, 1951; Evans and Yoshimoto, 1955, 1962).

That of *Arctosa littoralis* (Lycosidae) for *Anoplius* (*Arachnophroctonus*) *americanus ambiguus* substantiates earlier records for this host species of spider (see Evans, 1951). Additional host records for *A. americanus ambiguus* include species of Lycosidae and Oxyopidae (Evans and Yoshimoto, 1955, 1962; Hurd and Wasbauer, 1956; Wasbauer and Powell, 1962). The record of *Arctosa littoralis* as prey of *Anoplius* (*Arachnophroctonus*) *relativus* is, however, new. Previous records for this species of spider-wasp comprise the lycosid genera *Lycosa* and *Geolycosa* and the agelenid genus *Agelenopsis* (summary in Evans and Yoshimoto, 1962; Kurczewski and Kurczewski, 1968a, b, 1973).

Anoplius (*Pompilinus*) *percitus* has previously not been collected with prey and the record presented herein, therefore, indicates an initial preference for small Lycosidae (*Trochosa* sp.). Other species in this subgenus which utilize small Lycosidae exclusively as prey include *clystera* (Banks) (Wasbauer and Powell, 1962), *cylindricus* (Cresson) (Kurczewski and Kurczewski, 1968a, 1973), *estellina* (Banks) (Evans, 1964), *krombeini* Evans (Evans and Yoshimoto, 1962; Kurczewski and Kurczewski, 1973), *s. stenotus* (Banks) (Krombein and Evans, 1955; Kurczewski and Kurczewski, 1973), and *stenotus bequaerti* (Dreisbach) (Krombein, 1964). Two of the species, *cylindricus* and *estellina*, either utilize the spider's burrow for a nest or nest in a pre-existing burrow or depression in the soil.

The record of *Pardosa steva* as prey of *Anoplius* (*Anoplius*) *ithaca*, albeit new, emphasizes the fact that this species of pompilid prefers small lycosids of the genera *Pardosa* and *Arctosa* (Evans and Yoshimoto, 1962; Kurczewski and Kurczewski, 1968a, 1973). *Anoplius* (*Anoplius*) *toluca* has been previously collected with *Lycosa* sp. (Lycosidae) (Evans, 1964) and, therefore, our two records for the lycosid genera *Schizocosa* and *Trochosa* only narrowly extend the host selection parameters of this species of pompilid.

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